Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Inquiry Concerning 9-1-1 Access, Routing, and Location in Enterprise Communications Systems	)	PS Docket No. 17-239
	)	

REPLY COMMENTS OF WEST SAFETY SERVICES, INC.

West Safety Services, Inc. ("West Safety") (f/k/a Intrado Inc.) respectfully submits the following comments in reply to the initial comments filed in response to the Commission's Notice of Inquiry in the above-referenced proceeding.[1]

I. INTRODUCTION

The record in this proceeding confirms the need for federal rules providing some benchmark level of protection and support of enhanced 9-1-1 (E9-1-1) capabilities for users of Enterprise Communications Systems (ECS). Commenters universally support implementation of E9-1-1 capabilities in ECS. Consistent with the historical record, the divergence in viewpoint centers on the regulatory means of achieving this end state. Public safety organizations, state public utility commissions and 9-1-1 vendors support federal ECS E9-1-1 rules, whereas voice and enterprise service providers, carrier groups and enterprise groups generally favor continued state regulation and/or voluntary compliance by best practices or industry standards.[2]

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[1] *Inquiry Concerning 9-1-1 Access, Routing, and Location in Enterprise Communications Systems*, PS Dkt. No. 17-239, Notice of Inquiry (rel. Sept. 26, 2017) (NOI).

[2] *See* Comments of National Emergency Number Association ("NENA") at 1-2, CC Dkt. No. 94-102 (filed July 5, 2012); Comments of Texas 9-1-1 Entities at 3, CC Dkt. No. 94-102 (filed July 5, 2012); Comments of Texas 9-1-1 Entities at 2-3, PS Dkt. 17-239 (filed Nov. 15, 2017) ("Texas 9-1-1 Entities Comments"); Comments of Boulder Regional Emergency Telephone Service Authority ("BRETSA") at 2-3, PS Dkt. 17-239 (filed Nov. 15, 2017) ("BRETSA Comments"); Comments of National Association of State 911 Administrations ("NASNA") at 2-3, PS Dkt. 17-239 (filed Nov. 15, 2017) ("NASNA Comments"); Comments of APCO International ("APCO") at 4, PS Dkt. 17-239 (filed Nov. 15, 2017) ("APCO Comments"); Comments of California Public Utilities Commission ("CPUC") at 2, PS Dkt. 17-239 (filed Nov. 15, 2017) ("CPUC Comments"); Comments of Colorado Public Utilities

Some commenters assert that the modern ECS marketplace is too complex and diverse to address through federal regulation, and others maintain that federal E9-1-1 regulations for ECS should only be adopted in concert with Next Generation 9-1-1 (NG9-1-1) planning and other relevant industry initiatives.[3] No commenter, however, denies the E9-1-1 gap in ECS or claims that the problem is not fixable. For the reasons explained below and in West Safety's initial comments, West Safety believes that the Commission can and should proceed with a rulemaking proposing uniform E9-1-1 rules for ECS requiring direct 9-1-1 dialing, onsite notification, appropriate routing to the correct Public Safety Answering Point (PSAP) and accurate and reasonably precise location information.

II. DISCUSSION

A. Closing the Gap for ECS E9-1-1 is Necessary and Feasible

Commenters generally agree that the gap in E9-1-1 for ECS is significant and problematic for public safety.[4] Efforts to address direct 9-1-1 dialing and onsite notification for ECS are underway at Congress and through industry engagement. West Safety is especially pleased to see the comments of the American Hotel & Lodging Association ("AHLA") outlining the actions of major hoteliers to implement direct 9-1-1 dialing.[5] Precise location and accurate

Commission ("CO PUC") at 1, PS Dkt. 17-239 (filed Nov. 15, 2017) ("CO PUC Comments"); Comments of Ad Hoc Telecommunications Users Committee ("Ad Hoc") at 1-2, CC Dkt. No. 94-102 (filed March 29, 2004); Comments of AT&T at 9-10, CC Dkt. No. 94-102 (filed July 5, 2012); Comments of Telecommunications Industry Association ("TIA") at 13, 21, CC Dkt. No. 94-102 (filed July 5, 2012); Comments of Verizon at 6, CC Dkt. No. 94-102 (filed July 5, 2012); Comments of AT&T at 6-7, PS Dkt. 17-239 (filed Nov. 15, 2017) ("AT&T Comments"); Comments of Verizon at 4, PS Dkt. 17-239 (filed Nov. 15, 2017) ("Verizon Comments"); Comments of Ad Hoc at 3-4, PS Dkt. 17-239 (filed Nov. 15, 2017) ("Ad Hoc Comments").

[3] *See* Ad Hoc Comments at 2, 3-5; AT&T Comments at 2-3; Comments of Cisco Systems, Inc. at 7-8, PS Dkt. 17-239 (filed Nov. 15, 2017) ("Cisco Comments"); Comments of RingCentral, Inc. at 5-6, PS Dkt. 17-239 (filed Nov. 15, 2017) ("RingCentral Comments"); Comments of TIA at 5, PS Dkt. 17-239 (filed Nov. 15, 2017) ("TIA Comments"); Comments of Bandwidth Inc. at 4, PS Dkt. 17-239 (filed Nov. 15, 2017) ("Bandwidth Comments").

[4] *See* Comments of NENA at 5-6, PS Dkt. 17-239 (filed Nov. 15, 2017) ("NENA Comments"); Texas 9-1-1 Entities Comments at 3-4; BRETSA Comments at 3-4; APCO Comments at 2-5; CPUC Comments at 8-9; CO PUC Comments at 2-3.

[5] Comments of AHLA at 2-4, PS Dkt. 17-239 (filed Nov. 15, 2017).

routing for ECS E9-1-1, however, continues to lag behind wireless and wireline communications.[6]

The comments establish numerous trends in the ECS marketplace relevant to 9-1-1 and the NOI: (i) total 9-1-1 calls from ECS are decreasing as a percentage of all 9-1-1 calls but ECS calls remain statistically significant and often lack location information, (ii) enterprise organizations are shifting rapidly to IP-based ECS and cloud-based voice solutions, and (iii) reliance on remote workers using virtual private networks (VPNs) to connect to enterprise Voice over Internet Protocol (VoIP)/Unified Communication (UC) platforms continues to increase.[7] Some voice and enterprise service providers cite to these trends as cause for regulatory restraint.[8] West Safety disagrees with these comments given the size of the E9-1-1 gap for ECS and wide-availability of low-cost E9-1-1 solutions for the vast majority of ECS equipment and VoIP/UC platforms.

1. Scope of Gap in ECS E9-1-1

The limited data that exists for ECS E9-1-1 demonstrates that millions of 9-1-1 calls are being made annually from ECS and many times the Automatic Location Information (ALI) provided with these calls lacks critical location granularity for building/floor/room/suite/etc. In particular, the California Public Utilities Commission (CPUC), based on Emergency Call and Tracking System (ECaTS)[9] data provided by the California State 9-1-1 Office of Emergency

[6] *See* NENA Comments at 5-6; BRETSA Comments at 4; APCO Comments at 3; CPUC Comments at 8-9; CO PUC Comments at 2-3.

[7] *See* Comments of West Safety at 7-9, PS Dkt. 17-239 (filed Nov. 15, 2017) ("West Safety Comments"); CPUC Comments at 9-10; Texas 9-1-1 Entities Comments at 3-4; Bandwidth Comments at 1-2; Ad Hoc Comments at 3-4; Comments of Red Sky Technologies, Inc. ("RedSky") at 3-4, PS Dkt. 17-239 (filed Nov. 14, 2017) ("RedSky Comments"); Cisco Comments at 7-8.

[8] Ad Hoc Comments at 2, 3-5; AT&T Comments at 2-3; Cisco Comments at 7-8; RingCentral Comments at 5-6; TIA Comments at 5; Verizon Comments at 4.

[9] ECaTS provides unified 9-1-1 network traffic monitoring and call reporting solutions for local and statewide government agencies and PSAPs across the United States. West Safety recently purchased ECaTS on November 8,

Services (Cal OES), estimates that over two and half million calls to 9-1-1 were made from ECS in 2016 representing 9.12% of all 9-1-1 calls in California.[10] The CPUC also explains Cal OES's determination, based on the statewide ECaTS data gathered in 2011, that thousands of ECS subscribers do not correctly utilize the supplemental data field to provide responders with reasonably precise ALI.[11] Using Class of Service (CoS) designations, which likely undercounts ECS calls due to CoS non-assignment or miscoding, the Texas 9-1-1 Entities conclude that legacy business wireline and business VoIP are still a noteworthy amount of 9-1-1 calls compared to residential services.[12]

2. Feasibility of Federal ECS E9-1-1 Rule

Commenters uniformly agree that private enterprise organizations have shifted almost entirely to IP-based ECS and VoIP/UC origination.[13] It is also widely recognized and accepted by commenters that IP network and voice solutions possess far more capacity than legacy systems to support reliable 9-1-1 provisioning for modern enterprise organizations, including precise 9-1-1 location for nomadic ECS callers.[14] A handful of commenters nevertheless contend that the modern ECS environment is too diverse and complex for "one-size fits all" E9-1-1 regulation by the Commission, citing for support the technical challenges posed by

2017. Due to confidentiality concerns, West Safety is unable to disclose state or PSAP-specific 9-1-1 call data without customer approval. West Safety, at the time of this filing, is still evaluating ways to provide the Commission with aggregated 9-1-1 call data across its entire PSAP footprint.

[10] CPUC Comments at 9.

[11] *Id.* at 10-11.

[12] Texas 9-1-1 Entities Comments at 4, Atts. A & B.

[13] *See* Bandwidth Comments at 1-2; Ad Hoc Comments at 3-4; RedSky Comments at 1-2.

[14] *See* Comments of Comtech Telecommunications Corp. ("Comtech") at 2-3, PS Dkt. 17-239 (filed Nov. 15, 2017) ("Comtech Comments"); RedSky Comments at 2-4; Bandwidth Comments at 2-3; RingCentral Comments at 3-4; Cisco Comments at 18-19.

application-based ECS and VPNs for remote workforces.[15] West Safety believes this cautionary direction overemphasizes the complexity of IP-based ECS and ignores the more important reality that the stakes are much higher for failures in 9-1-1 location/routing in distributed and virtual ECS configurations spread across multiple states and buildings.[16]

In West Safety's experience as the leading provider of 9-1-1 solutions for ECS, all modern IP-based ECS configurations and VoIP/UC platforms are capable of supporting accurate location provisioning and appropriate routing for 9-1-1 either natively through ECS equipment or by reliance on 9-1-1 service providers.[17] West Safety and other 9-1-1 service vendors offer low-cost solutions for E9-1-1 compliance that are adaptable to a variety of voice platforms and require minimal ongoing maintenance after initial configuration.[18] These solutions support automatic tracking of IP phones, including soft phones and Wi-Fi enabled mobile devices (using layer 2 or layer 3 tracking[19]), move/add/change events, Wi-Fi roaming within an office, and remote employees using VPNs to make calls from ECS. Many of West Safety's customers have remote workers that are easily supported over home or public broadband connections outside the enterprise, and numerous other providers of ECS 9-1-1 services offer similar applications for mobile soft phone users.[20]

Moreover, a small subset of ECS configurations and VoIP/UC platforms that might not support all elements of E9-1-1 services should not be used as a basis to postpone federal

[15] Ad Hoc Comments at 2; Cisco Comments at 7-8; RingCentral Comments at 5-6; TIA Comments at 5; AT&T Comments at 2, 4-5.

[16] CPUC Comments at 10.

[17] West Safety Comments at 10-13; RedSky Comments at 3.

[18] West Safety Comments at 24-25; RedSky Comments at 8.

[19] West Safety Comments at 12-13; RedSky Comments at 3 (explaining automated network discovery of devices using layer 2 and layer 3 network discovery).

[20] *Id.*

regulation necessary to protect public safety. Consumers expect all of their 9-1-1 calls will be routed to the appropriate PSAP and timely help will be dispatched to the caller's precise location.[21] That expectation does not change if the caller sits behind ECS; in fact, the E9-1-1 capabilities of ECS will be even more important in the near future as enterprise communication platforms and devices converge in the workplace and desk phones are eliminated.

B. The Record Establishes that the Commission is Best Positioned to Close the ECS E9-1-1 Gap

Fourteen years after the Commission decided to defer ECS E9-1-1 regulation to the states in the E9-1-1 Scope Order, it is now undeniable that exclusive state regulation of ECS E9-1-1 is not working.[22] The vast majority of commenters agree that state regulation has resulted in a patchwork of rules not suitable for enterprise implementation of ECS or public safety.[23] Moreover, large portions of the population remain unprotected in states such as California (39.25M pop.) and New York (19.75M pop.) that have been unable to pass any ECS E9-1-1 regulation and states like Texas (27.86M pop.) that have passed location requirements only for certain types of ECS. Faced with significant barriers to adopting comprehensive and effective state regulation of ECS E9-1-1 with penalties for non-compliance, the state public utility commissions and 9-1-1 authorities that commented on the NOI tellingly appear to be proponents of some form of cooperative federal regulation.[24]

1. The California Experience

[21] *See* Texas 9-1-1 Entities Comments at 4-5; CPUC Comments at 6; CO PUC Comments at 5-6; NENA Comments at 5-6; RedSky Comments at 9-10.

[22] *Revision of the Commission's Rules to Ensure Compatibility With Enhanced E9-1-1 Emergency Calling Systems*, Report and Order and Second Further Notice of Proposed Rulemaking, 18 FCC Rcd 25340, 25362-63 (2003) (E9-1-1 Scope Order).

[23] *See* NENA Comments at 5; APCO Comments at 2; RedSky Comments at 10-13; CO PUC Comments at 1; Bandwidth Comments at 3; West Safety Comments at 5-7.

[24] *See* CO PUC Comments at 1-2, 7; Texas 9-1-1 Entities Comments at 1; NASNA Comments at 4; BRETSA Comments at 1-2, 7-8; CPUC Comments at 2.

The CPUC's account of California's efforts to regulate ECS E9-1-1 underscores the need for Commission action and the challenges faced by exclusive reliance on state law. After an extended review of critical emergency access protections for users of ECS in R.10-04-011, the CPUC concluded a legislative solution was necessary to address ECS E9-1-1 because of the various jurisdictional limitations of the CPUC, including Commission deregulation of the manufacture and distribution of customer premise equipment ("CPE").[25] Despite strong support by the CPUC, the California State Assembly failed to pass a 2013 bill patterned on the NENA model legislation and there still is no legislative mandate in California requiring ECS to support E9-1-1 capabilities.[26] Notably, the CPUC explains that during its ECS E9-1-1 proceeding, the California PSAPs and other stakeholders uniformly confirmed that the existing voluntary approach is not working in California.[27]

2. Commission Authority

Several commenters suggest that the Commission may lack jurisdiction to regulate ECS E9-1-1.[28] These jurisdictional concerns are overstated. No commenter is recommending that the Commission consider adopting rules that regulate the activities and purchase decisions of passive enterprise owners managing ECS. Instead, West Safety and others are advocating for Commission jurisdiction over ECS operators, which includes those businesses who choose to operate their own on-premises phone system and cloud PBX providers of VoIP/UC services, and ECS equipment and service vendors. Title I of the Act and the Twenty-First Century

[25] CPUC Comments at 4, 8.

[26] *Id.* at 5-6. West Safety believes that the other 26 states without ECS E9-1-1 laws face similar barriers to legislative solutions due to political pressure, state deregulation of IP-based services, CPE deregulation and the uncertain regulatory classification of VoIP.

[27] CPUC Comments at 2.

[28] *See* Ad Hoc Comments at 7-9, 11; AT&T Comments at 1-2, 5, 7; TIA Comments at 5-6.

Communications and Video Accessibility Act of 2010 (CVAA) provide the Commission with adequate authority to regulate these specific segments of the ECS marketplace. In addition, West Safety agrees with other commenters that consideration should be given to modifying the Commission's existing 9-1-1 rules for providers of interconnected VoIP services.[29]

West Safety disagrees with those commenters that contend the House and Senate bills for Kari's Law are an indication that the Commission lacks jurisdiction to regulate ECS E9-1-1 or that Congress does not wish to expand Commission jurisdiction in this area.[30] These bills were drafted and designed to address the narrow problem with direct 9-1-1 dialing from ECS in the wake of a horrible tragedy. Precise location and appropriate routing are more complex concerns suited better for Commission regulation, which Congress acknowledged in the Next Generation 911 Advancement Act of 2012 when it directed the Commission to issue a public notice seeking comment on the feasibility of requiring ECS manufacturers to support sufficiently precise location information.[31]

3. Next Steps

The Commission is uniquely positioned to develop core principles for ECS E9-1-1 that serve as a regulatory backstop to state regulation without inhibiting innovation or the ability of enterprise organizations to configure and manage their networks and ECS. In fact, as numerous commenters observe, federal ECS E9-1-1 rules could actually accelerate broader NG9-1-1 adoption.[32] Proposed rules can be developed in concert with NG9-1-1, National Number Portability (NNP) and SIP-based location routing using PDF-LO routing for NG9-1-1. However,

[29] TIA Comments at 1; Ad Hoc Comments at 14; Texas 9-1-1 Entities Comments at 2.

[30] Ad Hoc Comments at 8-9; Cisco Comments at 15.

[31] Next Generation 911 Advancement Act at § 6504(b), 126 Stat. 242.

[32] NENA Comments at 7; Comtech Comments at 4, PS Dkt. 17-239; Bandwidth Comments at 2-3.

these industry initiatives should not delay the Commission from adopting transitional requirements for the delivery of ECS calls with public switched telephone network (PSTN) connectivity to the PSAP.[33]

Consistent with the rules for wireless 9-1-1 calls, the Commission could develop phased-in, accuracy benchmarks for "dispatchable location" necessary to adequately identify the location of a 9-1-1 caller from ECS. Special use cases for complex ECS configurations can be addressed through an appropriately tailored waiver/forbearance scheme and a generous implementation schedule. Over time, standards could be developed to leverage existing capabilities such as the National Emergency Address Database (NEAD) database, device-based hybrid and other technologies currently being advanced for Commercial Mobile Radio Service (CMRS) 9-1-1.[34] A separate rulemaking could also be initiated to address the broader issue of consistent and uniform NG9-1-1-based guidance.

West Safety is happy to meet with and discuss the ECS E9-1-1 problem with the Commission, the industry and the PSAP community as suggested by some commenters.[35] West Safety is concerned, however, by the prospect of prolonged delay given the history of this proceeding and previous recommendations for standards development and workshops in lieu of federal regulation.[36] West Safety therefore recommends that the Commission proceed with a rulemaking for adoption of a nationwide E9-1-1 rule ensuring ECS support of direct 9-1-1 access, onsite notification, appropriate routing to the correct PSAP and accurate and sufficiently precise location.

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[33] *See* Verizon Comments at 2-4.

[34] Comments of CTIA at 2-5, PS Dkt. 17-239 (filed Nov. 15, 2017).

[35] Bandwidth Comments at 7; Comtech Comments at 3; TIA Comments at 5; Cisco Comments at 22.

[36] West Safety Comments at 33, fn. 73.

III. CONCLUSION

West Safety appreciates the opportunity to provide these reply comments and respectfully requests that the Commission proceed with a rulemaking and propose rules mandating ECS support of E9-1-1 capabilities.

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Respectfully submitted,

/s/Mary Boyd

Mary Boyd, VP, Regulatory and Government Affairs
West Safety Services, Inc.
1601 Dry Creek Drive
Longmont, CO 80503
mary.boyd@west.com
Phone: 720-494-5971
Fax: 720-494-6600

/s/Sean M. Ward

Sean M. Ward
Associate Counsel
West Corporation
1601 Dry Creek Drive
Longmont, CO 80503
sward@west.com
Phone: 720-864-5510
Fax: 720-494-6600